

# **An Investigation of the Connection Between Outdoor Orientation and Thriving**

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## **Abstract**

This study explored the contribution of outdoor orientation experiences to student thriving. Participants included 295 first-year college students from three institutions across North America. A thriving model was tested using structural equation modeling and included the following variables: outdoor orientation, thriving, involvement, spirituality, psychological sense of community, student–faculty interaction, and control variables. Although the predictive importance of outdoor orientation is modest ( $\beta = .048$ ), it contributes significantly to a model explaining 72.8% of the variance in thriving levels. Outdoor orientation directly predicted campus involvement ( $\beta = .246$ ) and spirituality ( $\beta = -.146$ ). Findings indicate that participating in an outdoor orientation may create a propensity for students to become more involved in campus life, which may foster a greater sense of campus community, culminating in thriving. These results suggest that practitioners should enhance both a psychological sense of community among students and the durability of outdoor experiences back on campus.

**KEYWORDS:** outdoor orientation; student thriving; outdoor adventure education; student development; student success; college students

Over the past 60 years, student success outcomes have been primarily measured by academic grades. This narrow focus on academic performance has neglected the importance of noncognitive factors in the educational experience of students (Yazedjian, Toews, Sevin, & Purswell, 2008). As a result, holistic educational efforts have often been pushed to the margins of the modern academy's core endeavors (Bok, 2006; Schreiner, 2010; Tagg, 2003). Yet holistic student development has historically been the focus of higher education in North America and the medieval university in Europe. Only within the last half-century have the outcomes narrowed to student grades and graduation rates (Schreiner, 2013; Strange, 2010), national college rankings (Bok, 2006), knowledge acquisition and credentialing (Smith, 2014), and successful enrollment numbers (Strange, 2010).

Recognizing this shift had resulted in a significant aspect of student success being overlooked, researchers at the turn of the millennium once again began to explore the role of psychosocial predictors of student success (Robbins, Oh, Le, & Button, 2009). Representing the intersection of positive psychology, flourishing, and psychological models of student retention, the concept of thriving also emerged at this time (Schreiner, 2010). Although thriving is a relatively new construct in higher education, it offers an expanded and more holistic view of student success and incorporates cognitive and noncognitive factors predictive of other college success outcomes (Schreiner, 2013).

As the conceptualization of student success has shifted toward a more holistic perspective, so too has the campus programming designed to enhance student well-being. One example of an emerging area of cocurricular campus programming is outdoor adventure education. Although this programming has been in existence since the 1940s in the United States (Ewert & Sibthorp, 2014), in the last decade outdoor adventure education programs have expanded significantly in higher education, primarily through efforts such as outdoor orientation programs (Bell, Gass, Nafziger, & Starbuck, 2014). Outdoor orientation is a high-impact experience-based practice with an emphasis on holistic student development.

Despite the holistic emphasis of outdoor orientation programs, outcomes research on these programs has primarily focused on interpersonal outcomes, rather than intrapersonal or intellectual outcomes (Bell et al., 2014). In recent research on college student thriving and the role of various campus experiences, researchers have found these experiences to contribute to thriving in small but significant ways. Through studies with thousands of college students across the United States, Canada, and Australia, researchers have documented that thriving is a mediating variable that predicts college students' academic performance, intent to graduate, and belief that tuition is a worthwhile investment (Schreiner, Kalinkewicz, Cuevas, & McIntosh, 2013). However, to date, no researchers have explored the role of outdoor orientation programs in first-year students' thriving. Research exploring the connection between outdoor orientation and thriving will expand the scope of outdoor orientation research to include academic and psychological outcomes. Moreover, to date, researchers have sparingly used structural equation modeling as a methodological approach in outdoor orientation research. Understanding the connection between outdoor orientation experiences and holistic well-being might inform future research and guide practitioners in designing optimal experiences that promote student thriving. This study fills an important scholarship gap by answering the following research question: What is the contribution of participation in an outdoor orientation program to the variation in thriving among undergraduate college students, after controlling for race, gender, high school grades, major certainty, first choice at enrollment, living on campus, and institutional selectivity?

## Literature Review

Although the thriving and outdoor orientation bodies of literature are growing, they are still nascent. This study explores a high-impact practice that may represent a pathway for stu-

dent thriving. The literature review, therefore, concentrates on two major constructs: (a) student well-being, the dependent variable, operationalized as student thriving (Schreiner, 2014) and (b) outdoor adventure-based experiences, the independent variable, operationalized as outdoor orientation participation (Bell et al., 2014). Additionally, the literature review also includes a brief section on the control variables included in the study.

**Outdoor Orientation**

Outdoor orientation is “defined as orientation or pre-orientation experiences for small groups (15 or fewer) of first-year students that use adventure experiences and include at least one overnight in a wilderness setting” (Bell, Holmes, & Williams, 2010, p. 3). O’Connell (2011) further suggested that outdoor orientation exposes students to unfamiliar environments, similar to the curriculum of Outward Bound, in which students can learn skills that are transferred back to the college environment. Although outdoor orientation programming is primarily a U.S. phenomenon, it has recently been introduced in Canadian higher education and is growing in popularity globally. A recent census of U.S. programs revealed that 25,164 students participated in outdoor orientation programs in 2012, up from 17,547 in 2006, which represents a 43% increase in student participation (Bell et al., 2014). In this study, outdoor orientation is a dichotomous variable because first-year students were asked to self-identify whether or not they have participated in an adventure-based outdoor orientation program.

**Effectiveness of Outdoor Orientation Programs**

The effectiveness of outdoor orientation programs has been assessed through a variety of methods. Although most of the studies focused on the social and relational benefits of these programs, additional outcomes of such programs included persistence rates, student levels of spirituality, academic success, and psychosocial qualities. A summary of the outdoor orientation effectiveness literature is listed in Table 1.

**Table 1**  
*Overview of Outdoor Orientation Program Outcomes (adapted from Bell, et. al, 2012)*

<b>Outcomes</b>	<b>Findings of outdoor orientation participants</b>	<b>Researcher(s)</b>
Retention	<ul style="list-style-type: none"> <li>• No attrition in either group</li> <li>• Higher retention rates for outdoor orientation (1 year)</li> <li>• Higher mention rates approaching sig (<math>p = .06</math>; 3 years)</li> <li>• Higher retention rates of outdoor orientation</li> <li>• Non significant results (<math>p = .07</math>; 1 year)</li> <li>• Higher retention rates</li> <li>• Higher retention rates and graduation rates</li> <li>• Higher retention rates than first-year experience course</li> </ul>	<ul style="list-style-type: none"> <li>• Stogner, 1978</li> <li>• Gass, 1987</li> <li>• Gass, 1990</li> <li>• Brown, 1998</li> <li>• Vlamis, Bell, &amp; Gass, 2011</li> <li>• Hill, Nolan, &amp; Scrogin, 2010</li> <li>• Bell &amp; Chang, 2017</li> <li>• Michael, Morris-Dueer, &amp; Reichart, 2017</li> </ul>
GPA	<ul style="list-style-type: none"> <li>• Participants had higher GPA after 1 year</li> <li>• Participants had higher GPA after 1 year</li> <li>• Nonsignificant, but trending higher GPA after 6 months</li> </ul>	<ul style="list-style-type: none"> <li>• Stogner, 1978</li> <li>• Gass, 1987</li> <li>• Vlamis, 2002</li> </ul>

**Table 1 (cont.)**

<b>Outcomes</b>	<b>Findings of outdoor orientation participants</b>	<b>Researcher(s)</b>
Relationship Development	<ul style="list-style-type: none"> <li>• Closest on-campus friends came from program</li> <li>• Increased number of friendships</li> <li>• Friends as a consequence of participation</li> <li>• Peer friendships as a support network</li> <li>• Development of positive relationships</li> <li>• Strong connections with peers</li> </ul>	<ul style="list-style-type: none"> <li>• Devlin, 1996</li> <li>• Austin, Martin, Mittelstaedt, Schanning, &amp; Ogle, 2009</li> <li>• Lien &amp; Goldenberg, 2012</li> <li>• Gass, Garvey, &amp; Sugerman, 2003</li> <li>• Wolfe &amp; Kay, 2011</li> <li>• Bell &amp; Holmes, 2011</li> <li>• Bell, 2012</li> </ul>
Adjustment to College	<ul style="list-style-type: none"> <li>• Significant higher scores on personal-emotional adjustment, goal commitment/institutional attachment, and overall adjustment to college</li> <li>• Significant higher scores on First Year Initiative scale, with high effects sizes on factors “connection to peers” and “knowledge of wellness”</li> <li>• Significant higher scores in overall adjustment to college, social adjustment, and attachment to the institution (medium effect size)</li> </ul>	<ul style="list-style-type: none"> <li>• Bobilya, Akey, &amp; Mitchell, 2011</li> <li>• Bell, 2012</li> <li>• Ribbe, 2011</li> <li>• Ribbe, Cyrus, &amp; Langan, 2016</li> </ul>
Spirituality	<ul style="list-style-type: none"> <li>• Increase in spiritual development of participants</li> <li>• Increase in spiritual development of leaders</li> </ul>	<ul style="list-style-type: none"> <li>• Bobilya et al., 2011</li> <li>• Starbuck &amp; Bell, 2017</li> </ul>
Social Support and Social Skill Development	<ul style="list-style-type: none"> <li>• Higher social support levels on Campus Focused Social Provisions Scale</li> <li>• Increased self-efficacy</li> <li>• Significantly higher levels on the variables developing autonomy, interdependence, appropriate relationships with the opposite gender, and tolerance</li> <li>• Significantly higher levels of the variable tolerance</li> </ul>	<ul style="list-style-type: none"> <li>• Bell, 2006</li> <li>• Jones &amp; Hinton, 2007</li> <li>• Gass, 1987</li> <li>• Vlamis et al., 2011</li> </ul>

## Student Thriving

In this study, thriving is the dependent and ultimate endogenous variable. When students are thriving in college, they are energized by the learning process because they connect what they are learning to their life and the world, regulate their learning to enhance success, develop a positive perspective during times of failure and challenging circumstances, develop healthy relationships with others, appreciate difference in others, and make a meaningful contribution to their community (Schreiner, 2012). The construct of thriving comprises five empirically demonstrated and malleable factors that represent the academic, interpersonal, and intrapersonal domains of thriving: (a) Academic Determination, ability to regulate one's own learning and make the appropriate effort to succeed; (b) Engaged Learning, capacity to deeply process and

make sense of course material contribute to academic thriving; (c) Positive Perspective, ability to view challenges with an optimistic perspective contributes to psychological thriving; (d) Diverse Citizenship, desire to make a meaningful contribution to community while being open to diverse others and perspectives; and (e) Social Connectedness, capacity to cultivate healthy interdependent relationships (Schreiner, 2010) is connected to social thriving.

Thriving aligns with the primary goal of positive psychology, to increase the number of people in the world who experience enhanced levels of emotional, psychological, and social well-being (Seligman, 2011). The ultimate goal of thriving research is to design, develop, and implement in- and out-of-class high-impact interventions that positively affect college student success (Schreiner, 2010, 2012, 2013). In this way, a focus on thriving shifts the role of educator from deficit remediation to strengths development (Schreiner, 2010). Holistic student well-being, operationalized as thriving, was measured using 23 items from the Thriving Quotient™ (Schreiner, 2014). Items were answered on a 6-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *somewhat disagree*, 4 = *somewhat agree*, 5 = *agree*, 6 = *strongly agree*).

Four particular factors are known to contribute to student thriving: psychological sense of community, spirituality, interaction with faculty, and campus involvement (Schreiner, 2013). Each of these factors is represented to some degree in the activities or goals of outdoor orientation programs. The link between outdoor orientation programming and thriving is strengthened by including these factors in the model tested in this study.

### **Psychological Sense of Community**

Psychological sense of community (PSC) refers to students' belief that their needs are fulfilled, they matter, they have influence, and they have what Baumeister and Leary (1995) described as a sense of belonging within the campus community (McMillan & Chavis, 1986; Sarason, 1974). The construct of PSC is known to contribute to student thriving (Schreiner, 2013). Some research has also suggested a strong link between outdoor educational pursuits and PSC (Breunig, O'Connell, Todd, Anderson, & Young, 2010). O'Connell (2014) argued that PSC can be used as a framework for outdoor adventure programming. First proposed by Sarason (1974), PSC is defined as a "readily available network of one's relationships that one can call on for support at any time, and is characterized by a sense of belonging, dependence of members on one another, needing each other, and each identifying with common overarching values" (p. 1). Yet it was the landmark paper by McMillan and Chavis (1986) that propelled the construct of PSC into scholarly prominence. In McMillan and Chavis's theoretical framework, they proposed that PSC includes the following criteria: (a) Membership, when college students feel they are full members of a community and have strong and stable relationships, they experience a greater sense of belonging; (b) Influence, the capacity of students to exert influence through expressing their own voice; (c) Integration or Fulfillment of Needs, individuals are drawn to communities in which the abilities and skills of others will serve their needs; and (d) Shared Emotional Connection, bonding is enhanced when the quality of the interaction is positive, when the shared event is important to all individuals, and when the interaction is frequent.

In this study, PSC is a latent construct hypothesized to have a direct effect on student thriving. Because PSC is a theoretical construct that cannot be observed directly, this factor is operationally defined by combining several observable items to statistically measure this latent variable. PSC, therefore, consists of the following four items: (a) I feel like I belong here, (b) being a student here fills an important need in my life, (c) I feel proud of the college or university I have chosen to attend, and (d) there is a strong sense of community on this campus (Schreiner, 2014).

### **Campus Involvement**

Student involvement theory has become one of several prominent student development theories shaping research and practice in higher education. Involvement is characterized by the investment of physical and psychological energy in the learning process (Astin, 1999). Tinto

(2012) concluded that involvement is “perhaps the most important condition for student success” (p. 7). Although involvement is often directly related to academic endeavors, it can occur in the cocurricular college environment through residence, honors programs, athletics, and student government (Astin, 1999). Involvement theory provides a linkage between campus practices and student outcomes (Wolf-Wendel, Ward, & Kinzie, 2009).

Campus involvement in this study represents the frequency of participation in certain cocurricular activities. Campus involvement is another latent construct measured through a combination of four items asking, how often have you participated this semester in the following: (a) student organizations on campus, (b) campus events or activities, (c) leadership of student organizations, (d) community service (Schreiner, 2014)?

## Spirituality

Although Strange (2013) asserted “interest in spirituality is ancient as life itself” (p. 199), spirituality within the modern academy “may be a foreign or novel goal for many educators” (Bowman & Small, 2013, p. 30). In response to a growing criticism of the lack of commitment to whole person development in higher education, a recent surge in interest in spirituality has occurred within the broader academy (Astin, Astin, & Lindholm, 2011; Bowman & Small, 2013; Rude, Parra, Lommel, Edens, & Kim, 2014).

Most striking among this burgeoning research activity is the 7-year landmark study conducted by Astin et al. (2011). They explored the role of spirituality in the lives of over 100,000 college students in the United States—a first of its kind (Astin et al., 2011). Spirituality has been defined as a multifaceted quality that involves a quest for answers to the big questions in life, a global worldview, compassion for others, service to others, and the ability to stay centered (Lindholm, 2013). The most notable finding in the landmark Astin et al. study is the high expectations for spiritual development reported by the majority of college students.

In this study, spirituality is conceptualized as a belief system that gives meaning and purpose to life and a sense of strength in difficult circumstances. Because spirituality is an abstract phenomenon that cannot be measured directly, it is considered a latent variable within this model. Spirituality is operationally defined through the inclusion of three items: (a) my spiritual or religious beliefs provide me with a sense of strength when life is difficult, (b) my spiritual or religious beliefs are the foundation of my approach to life, and (c) my spiritual or religious beliefs give meaning/purpose to my life (Schreiner, 2014).

## Student–Faculty Interaction

The impact of student–faculty interaction has been widely explored in higher education research (Kim & Sax, 2009). In a recent study, Schreiner et al. (2013) found student interaction with faculty was the second most influential factor predictive of student thriving among 4,845 traditional-age sophomore students; student–faculty interaction accounted for 11% of the variation in thriving, behind sense of community (27%) but just ahead of spirituality (8%). In the current study, student–faculty interaction is yet another latent construct because it is a theoretical construct that cannot be measured directly. Student–faculty interaction is hypothesized in the model to directly impact student thriving. Student–faculty interaction is operationalized by measuring the frequency with which students interact with faculty. Six items measured how often students have (a) met with their academic advisor, (b) discussed career or grad school plans with faculty, (c) discussed academic issues with faculty, (d) met with faculty during office hours, (e) e-mailed, texted, or Facebooked faculty, and (f) interacted with faculty outside the classroom (Schreiner, 2014).

## Control Variables

**Entry characteristics.** High school academic performance seems to in part predict university academic performance (Pascarella & Terenzini, 2005). Furthermore, in a regression analysis with 3,924 first-year college students using the National Survey of Freshmen, high school grades (for all racial/ethnic groups) were a significant predictor of academic success in college (Fischer, 2007).

In addition to academics, race/ethnicity is predictive of student success outcomes (Berger, 1997; Lundberg & Schreiner, 2004). In a recent quantitative dissertation exploring thriving in students of color, findings revealed that pathways to thriving varied between four racial groups (McIntosh, 2012). However, Schreiner et al. (2013) found that certain demographic variables such as race and gender become nonsignificant in predicting student success outcomes when thriving functions as a mediating variable.

Gender, in addition to grades and race, is included as a control variable in this study because of some empirical evidence supporting the premise that gender has conditional effects on student success outcomes (Berger, 1997; Pascarella & Terenzini, 2005); however, the findings are mixed. The results of McIntosh's (2012) thriving study revealed gender was not predictive of sense of community, student–faculty interaction, campus involvement, spirituality, or thriving. In contrast, Bell (2006) discovered that women who participated in an outdoor orientation program had higher levels of social support compared to male students. Moreover, Lien and Goldenberg (2012) found differential outcomes between male and female students in examining the outcomes of college student outdoor wilderness orientation participation, corroborating Bell's (2006) findings.

The final demographic variable included in the hypothesized model is whether students were attending the college that was their first choice of institution. The notion of first choice indicates a student's top priority in enrolling in a particular institution. In the omnibus model of thriving, first choice of institution was predictive of PSC (McIntosh, 2012). In other thriving research, first choice of enrollment contributed directly to the student success outcome of intent to graduate (Schreiner et al., 2013).

## Environmental Interaction

In addition to four demographic variables, two environmental interaction variables were included in the model: living on campus and major certainty. First, the connection between on-campus living and positive student learning outcomes has been widely acknowledged (Pascarella & Terenzini, 2005). Living on campus is linked to student gains in artistic interests, self-esteem, interaction with faculty, involvement in student government, and satisfaction with their experiences and friendships in particular (Astin, 1999). Living on campus contributes to a greater sense of community (Lounsbury & DeNeui, 1995). In a longitudinal study with 718 first-year students at a highly selective, residential college in the Southeast of the United States, findings revealed a significant correlation between sense of community in residence halls and social integration (Berger, 1997). Second, major certainty was included because it has been found to contribute directly to PSC and thriving (McIntosh, 2012). An outdoor orientation setting may provide ample opportunity for healthy student–faculty interaction, which might include conversations about selecting a major. Schreiner et al.'s (2013) study suggested student thriving and persistence can be enhanced when students are aided in choosing a major that is a good fit for them.

## Institutional Variable

Finally, in addition to four demographic variables and two environmental interaction variables, institutional selectivity was included as an institutional variable. Institutional selectivity is often connected with the perceived quality of the student body, and researchers have found that institutions that are more selective are associated with higher retention rates (Pascarella &

Terenzini, 2005). Examining specific thriving research, McIntosh (2012) found that institutional selectivity contributed directly to student–faculty interaction and campus involvement.

## Method

To determine how the latent constructs and observed variables contributed to thriving among college students and to explore the contribution of outdoor orientation participation on thriving, the researchers of this study developed a model (see Figure 1) based on recent college student thriving research (Cuevas, 2015; Derrico, Tharp, & Schreiner, 2014; McIntosh, 2012). This study seeks to answer the following research question: What is the contribution of participation in an outdoor orientation program to the variation in thriving among undergraduate college students, after controlling for race, gender, high school grades, major certainty, first choice at enrollment, living on campus, and institutional selectivity?

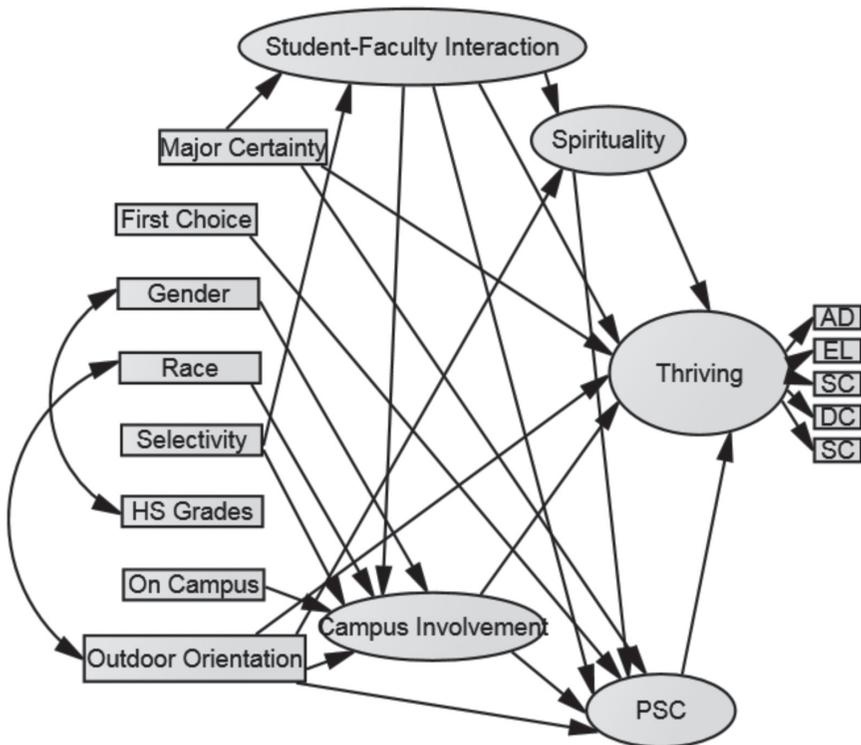


Figure 1. Hypothesized path model of thriving.

## Population and Sample

Upon institutional ethics approval, data were collected from 295 first-year undergraduate students in the fall of 2014, six to eight weeks after the outdoor orientation was complete, using the Thriving Quotient™. Of the 295 study participants, 87 participated in an outdoor orientation program prior to the standard orientation on campus, and the remaining 208 study participants did not participate in an outdoor orientation program. An individual from each of the three institutional research partners collected the data on behalf of the principal researcher through

an e-mail invitation to students that included a hyperlink to the informed consent form and the survey.

Institution A ( $N = 61$ ) was a private university located in the Midwestern United States ( $n = 30$  outdoor orientation participants and  $n = 31$  non-outdoor orientation participants). Their outdoor orientation program started in 1974 and takes place in a state park in New York. The Outward Bound-style program is 18 days in length and includes backpacking, canoeing, rock climbing and rappelling, and a 48-hour solo (time spent alone for the purpose of rest and reflection) or service project. Program goals include transition success, personal development, wilderness appreciation, outdoor skills, awareness, teamwork, responsible decision making, and fun.

Institution B ( $N = 80$ ) was a private, faith-based university located in the Midwestern United States whose outdoor orientation program started in 1969. Participants from two outdoor orientation tracks at Institution B were included in this study ( $n = 28$  outdoor orientation participants and  $n = 52$  non-outdoor orientation participants). The wilderness track (outdoor orientation) is a wilderness experience 10 days in length including backpacking and canoeing/kayaking in remote Minnesota and Wisconsin wilderness locations. This track also includes a 24- to 48-hour solo and 5 days at an outdoor leadership center. The second outdoor orientation is a camp track 8 days in length and located at the outdoor leadership center. This track includes activities such as sailing, biking, climbing, archery, and ceramics, along with adventure programs that facilitate group conversation and bonding, and finally an 8-hour solo.

In contrast to the other institutions that participated in this study, Institution C ( $N = 154$ ) was a large research-based university in western Canada ( $n = 29$  outdoor orientation participants and  $n = 125$  non-outdoor orientation participants). Their outdoor orientation program is camp based and 3 days in length, and it was started in 2011. Activities include experience-based activities such as low ropes challenge, leadership development, strengths assessment, zip-lining, group challenges and skits, and campfire conversation. Currently, only 1.4% of the first-year student body participates in this program. In alignment with the other programs, a small-group approach is utilized with five to eight students per group. Program goals include leadership development, personal development, university transition success, and personal empowerment. Student leaders (paraprofessionals), along with staff and camp counselors, assume the role of instructors.

## Thriving Quotient Instrument

To measure the construct of thriving, the reliable and valid Thriving Quotient™ instrument was utilized (Schreiner, 2014). Schreiner et al. (2013) conducted a confirmatory factor analysis using 2,889 subjects and concluded that the instrument has demonstrated construct validity as summarized by model fit indices,  $\chi^2(114) = 1093.83$ ,  $p < .001$ , CFI = .954, RMSEA = .054, 90% CI [.052, .058]. Since the 2008 pilot version was initially administered, the instrument has been under testing and refinement (Schreiner et al., 2013). A slightly revised Thriving Quotient™ that included 23 items was utilized for this study (Schreiner, 2014).

## Data Analysis

After the data were downloaded and merged into Predictive Analytics Software Statistics 22.0 and before SEM inferential analysis was conducted, exploratory data analysis was conducted based on an ungrouped data screening process recommended by Tabachnick and Fidell (2013). The screening process helped to address the following potential issues: missing data, normality, and outliers (Ullman, 2013).

SEM is a quantitative statistical analysis that allows researchers to fit more than one regression equation simultaneously and is an extension of regression analysis (Byrne, 2010). SEM tests the fit of a hypothetical or proposed model, built upon careful review of theory and research on the part of the researcher (Ullman, 2013). The analysis conducted in SEM tests the assumed re-

relationships proposed within the model including direct, indirect, and total effects. An advantage of SEM over other statistical techniques is that computer modeling allows the proposed model to be represented graphically in which arrows represent direct relationships between variables: a pictorial representation of a series of multiple regression equations. The direction of the arrowhead on the straight line indicates the directional effect of the relationship between the two variables; in other words, it indicates which variable is being regressed on the other.

## Results

Upon initial analysis using data from the sample population ( $N = 295$ ), the hypothesized model for thriving demonstrated a poor fit,  $\chi^2 = 371.436$  ( $df = 96$ ,  $p < .00$ ), CFI = .661, RMSEA = .099. Respecification of the model (adding and removing pathways between variables) was needed to improve the goodness-of-fit statistics. Modification indices indicated the potential for improvement of the model by adding predictive and covariance pathways. In addition, a number of nonsignificant ( $p < .05$ ) regression and covariance pathways were eliminated. Model respecification resulted in a significantly improved and parsimonious model,  $\chi^2 = 136.161$  ( $df = 88$ ,  $p < .001$ ), CFI = .939, RMSEA = .044, which can be characterized as a very good fitting model (see Figure 2).

As hypothesized in the model, the findings did not suggest a direct pathway between outdoor orientation and thriving. However, an indirect pathway between an outdoor orientation experience and college student thriving in the first semester was found. Thriving directly predicted campus involvement ( $\beta = .246$ ), campus involvement directly predicted psychological sense of community ( $\beta = .241$ ), and psychological sense of community predicted thriving ( $\beta = .739$ ). Although the predictive importance of outdoor orientation is modest and indirect ( $\beta = .048$ ), it contributes significantly to the model that explains 72.8% of the variance in thriving levels. One of the unexpected findings suggested that an outdoor orientation experience negatively predicted spirituality ( $\beta = -.146$ ). Direct, indirect, and total effects of the variables on the thriving outcome variable are detailed in Table 1.

**Table 1**  
*Standardized Direct, Indirect, and Total Effects of Exogenous Variables on Thriving*

Variables	Direct effect	Indirect effect	Total effect
Gender (FEMALE)	.00	.017	.017
High school grades (HSGRADES_R)	.197	.00	.197
First-choice institution (FIRSTCHOICE)	-.182	.186	.004
Certainty of major (MAJORSURE)	.153	.089	.242
On-campus residence (ONCAMPUS)	.00	.243	.243
Race (WHITE)	.00	.035	.035
Outdoor Orientation (WILDERNESS)	.00	.048	.048
Campus Involvement	.00	.279	.279
Spirituality	.00	.140	.140
Student-Faculty Interaction	.156	.00	.156
Psychological Sense of Community	.739	.00	.739
Diverse Citizenship (DC)	.560	.00	.560
Social Connectedness (SC)	.433	.00	.433
Engaged Learning (ELI)	.670	.00	.670
Academic Determination (AD)	.651	.00	.651
Positive Perspective (PP)	.367	.00	.367

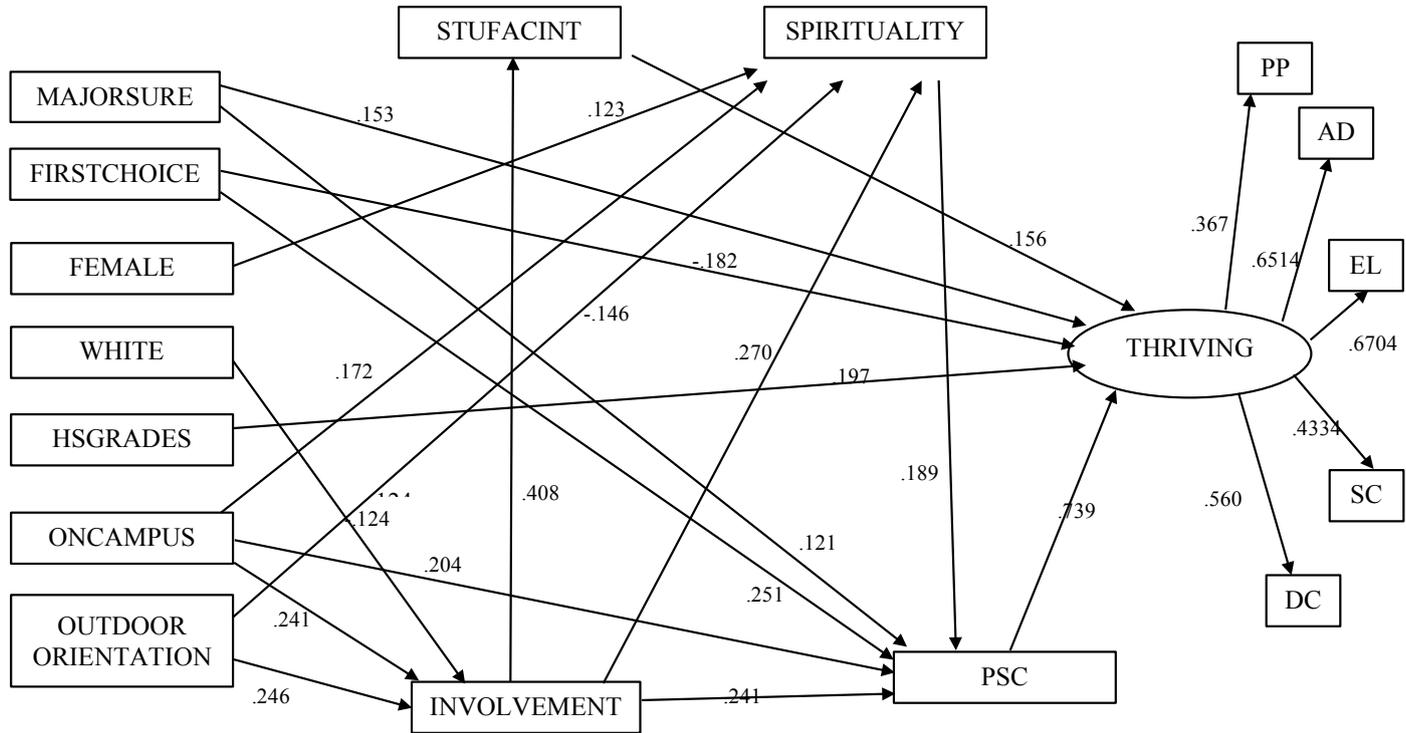


Figure 2. Final structural model for thriving.

## Discussion

Participating in outdoor orientation appears to set in motion a propensity for students to become more involved in campus life, which fosters a greater sense of community, which then culminates in thriving. The intersection of outdoor orientation with campus involvement, psychological sense of community, and spirituality are discussed in the context of the findings of this study.

### Outdoor Orientation Experiences and Student Involvement

The illumination of a significant pathway between outdoor orientation and campus involvement is the most salient finding in this study. A student's level of involvement is one of the most critical variables that affects the college experience (Astin, 1999; Tinto, 2012; Wolf-Wendel et al., 2009). Previous research by Soria, Troisi, and Stebleton (2012) established a strong link between involvement in campus organizations and subsequent student involvement in community service. It appears the primary means of continued student involvement is through the gateway experience of another student organization on campus. In this study, that gateway experience was outdoor orientation. Campus involvement then had a direct effect on students' psychological sense of community, which in turn had a direct effect on thriving. Involvement represents a pivotal mediating variable between an outdoor orientation experience and students' sense of community on campus, as well as their intellectual, interpersonal, and psychological well-being.

Based on this finding, outdoor orientation programming, currently limited to 191 programs, or about 10% of residential colleges in the United States (Bell et al., 2014), may represent a potent yet underutilized college practice that can indirectly influence student thriving through involvement and psychological sense of community. Before university classes even begin, the experience-based pedagogical practice of outdoor orientation can be a catalyst for cultivating early college student engagement. This finding is consistent with those in numerous studies, including Bell and Holmes (2011), Bobilya, Akey, and Mitchell (2011), and O'Connell (2011).

### Involvement and Psychological Sense of Community

The illumination of a pathway between student involvement and PSC in this study also corroborates DeNeui's (2003) study in which a clear link between student involvement and PSC was established in college students. Student organizations, clubs, and community service projects are often endorsed by the institution or student associations and would be characterized as educationally purposeful activities (Kuh, Schuh, & Whitt, 2005).

This linkage between involvement and PSC seems plausible for two reasons. First, students who voluntarily join an organization or club on campus are likely intrinsically motivated (Ryan & Deci, 2000), based on their individual choice to participate and the potential for connection to a group of peers with similar interests. A student's level of internal motivation would influence not only a student's decision to join, but also a student's level of involvement within the joined group. The level of student involvement in out-of-class experiences, such as community service, intramural athletics, student organizations, clubs, and student government, is associated with gains in perceived sense of community (Elkins, Forrester, & Noel-Elkins, 2011). For example, a student who joins a student club and has a positive experience may develop a capacity and desire to assume leadership responsibilities within the group. A student may begin recruiting other members, planning activities, writing policy, mentoring other group members, or liaising with the institution—all activities marked by the exertion of influence on others, policy, or culture. A sense of community, especially for first-year students looking for a place of connection as they begin their college tenure, could easily be cultivated through group involvement in which a student makes a substantial contribution to the group.

Second, under the right conditions, student involvement might include deeper levels of interpersonal and emotional connection, both elements included in the concept of PSC. If interdependent relationships are positive, meaningful, and frequent, then a shared connection can be fostered (McMillan & Chavis, 1986). Involvement can cultivate the conditions in which quality intergroup interactions can unfold (Denson & Chang, 2015). Although the gateway to involvement might have been a shared interest in an activity, the environment in which the students connected may have been conducive to the development of deeper levels of interpersonal trust.

### **Psychological Sense of Community and Student Thriving**

PSC had the largest direct effect on thriving of any variable in this study, which aligns with the findings from the Nelson and Vetter (2012) study in which PSC significantly predicted thriving among 908 first-year college students. The strong connection between PSC and thriving as discovered in this study corroborates the Cuevas (2015) study with 945 participants among 11 institutions in the United States in which PSC was found to be the strongest predictor of honors student thriving and the Petridis (2014) study with 2,918 graduate students in which students' PSC was the strongest predictor of thriving.

Psychological sense of community is a comprehensive and integrated construct that reflects the experiences of students who feel they belong, have influence, matter, and are connected to others in relationally and emotionally significant ways (DeNeui, 2003). Students who experience PSC are engaging in authentic community where self-awareness, authenticity, and vulnerability are cultivated in a nonjudgmental relational ecosystem. From this position of psychological and relational strength, a student is able to thrive—to develop academic, social, and psychological well-being. In contrast, students who do not experience PSC are likely only surviving, perhaps attempting to find a place to belong, to find their voice, and to connect with faculty and peers on a deeper level, but not succeeding in these tasks. Based on the connection between PSC and thriving established in this study, first-year students who are experiencing higher levels of PSC are likely connecting socially with other peers in educationally meaningful activities in and outside the classroom and are intrinsically motivated because they have exercised their volitional capacity to choose the kinds of academic courses and activities they enjoy (Ryan & Deci, 2000). In addition, they are positively reframing setbacks and failures because they have mentors and friends who encourage them to pursue a positive perspective, and they are not threatened by diverse viewpoints because they have developed a healthy view of themselves in the context of diverse community.

### **Outdoor Orientation and Spirituality**

It was hypothesized that participation in an outdoor orientation experience would predict levels of spirituality in students. However, the findings revealed the opposite: Outdoor orientation participants reported lower levels of spirituality. The findings suggest that students who participate in an outdoor orientation program are less likely to report a reliance on spirituality as defined in this study. The predicted pathway between outdoor orientation and spirituality was based on two studies that demonstrated this link within an outdoor orientation program (Bobilya et al., 2011) and a wilderness experience program (Fredrickson & Anderson, 1999). Although this finding was unexpected, variation in results can easily occur in a newer area of research. Because the results did not align with previous research, further statistical analysis was conducted to uncover possible explanations. The overall correlation between outdoor orientation participation and spirituality was  $r = -.017$ . A correlational analysis by institution revealed a positive relationship between an outdoor orientation experience and spirituality among students attending the faith-based college ( $r = .153$ ), but a negative relationship among students attending the research institution ( $r = -.022$ ) and the private institution ( $r = -.172$ ). Because of these correlational patterns, an explanation accounting for the negative pathway between outdoor orientation and spirituality seems most related to outdoor orientation program differences

and goals regarding the programmatic emphasis on spirituality or spiritual development as an intended outcome.

## Control Variables

Grades, major certainty, and student–faculty interaction positively and directly predicted thriving. First choice of institution directly and negatively predicted thriving. Living on campus directly and positively predicted spirituality, involvement, and psychological sense of community. The relatively strong and positive connection between living on campus and holistic well-being corroborates the link between a residential experience and positive student learning outcomes, as widely acknowledged (Pascarella & Terenzini, 2005). The findings in this study corroborate McIntosh's (2012) research that major certainty predicted thriving and psychological sense of community.

## Recommendations

Educators are increasingly pursuing experiential learning pedagogies as a means of reforming higher education (Bok, 2006). The findings of this study seem to provide helpful insight to improve higher education practices that enhance thriving and to guide additional research efforts.

### Recommendations for Practice

The following recommendations for higher education faculty and student affairs personnel are suggested based on the findings of this study. These recommendations focus on two major areas: enhancing the durability of outdoor orientation experiences on campus and enhancing the psychological sense of community among students.

**Enhance the durability of outdoor orientation experiences back on campus.** A hallmark of adventure education is the transference of learning from the outdoor experience into the everyday life of the participant (Walsh & Golins, 1976). Student participation in outdoor orientation experiences is not designed to be an end, but rather a means to an end, the ultimate goal being learning and holistic student development. Outdoor orientation staff need to focus even more effort toward facilitating the transfer of learning so that the benefits gained from the outdoor experience can positively influence campus life. Ewert and Sibthorp (2014) argued, “Developing ways to enhance the durability of the positive effects often experienced in OAE [outdoor adventure education] programs will be increasingly important for OAE professionals in the future” (p. 174). Several programmatic strategies could be implemented to maximize the gains from outdoor orientation experiences back on campus.

First, it is recommended that outdoor orientation programs support reflective activities that allow students to apply learning from their orientation experience. Many popular activities have been successfully utilized by outdoor orientation programs. For example, participants are asked to write a letter to themselves toward the end of the outdoor orientation program reflecting on their experiences—what they have learned, how they have grown, and how they think their growth and development will positively affect their college experience. This type of reflective exercise fosters deeper processing (McKenzie, 2000) of the connection between their outdoor orientation experiences and their anticipated experiences as first-year college students. The letters would be collected by the instructors and then given to students when they are back on campus.

Second, additional “mini-experiences” can help reinforce the benefits from an outdoor orientation, especially those that emulate some of the core features of the outdoor experience including (a) being “unplugged” from technology, (b) meeting with their outdoor orientation small group, and (c) reconnecting with their instructor. The intent of this reconnection would not focus on the element of task accomplishment associated with an optimally challenging environment, but rather on interpersonal connection and continued personal reflection. Mini-experiences

may include a walk within an urban park or forestland setting in close proximity to the campus in which participants would be free from technology. Benefits may include informal opportunities for more social connection. The instructor could also lead a pedagogically robust intentional group processing session. A small group reflection could prompt students to consider how their outdoor orientation experiences have contributed to their life and studies as a first-year student.

**Enhance psychological sense of community.** In this study, the contribution of PSC to thriving was powerful. Yet, within the field of outdoor adventure research, there is scant research linking outdoor experiences and PSC. O'Connell (2014) recently suggested that McMillan and Chavis's (1986) framework for PSC integrates well with outdoor adventure education. Bell (2012) complements O'Connell by suggesting that belonging and status are key components of psychological sense of community and should be viewed as an organizing principles in outdoor orientation design and implementation. The second recommendation for policy and practice is that outdoor orientation leaders and student affairs professionals should cultivate the four components of PSC more intentionally into outdoor orientation programs. Furthermore, PSC could be used as a framework in designing and implementing all in- and out-of-classroom college experiences.

**Increase membership.** Outdoor orientation program experiences have the potential of uniquely marking students as members in this experience by engendering a sense of belonging. Examples of marking include students receiving T-shirts, bracelets, or pins that are infused with meaning in the program. For example, a rope bracelet may mark membership in a community of students who have completed challenging activities together such as summiting a mountain, engaging a low-ropes course, or cooking a meal in the backcountry. Ritualized items can be successfully used to create powerful shared experiences and interpersonal connections (Bell & Holmes, 2011; Bell & Nafziger, 2014).

**Cultivate influence.** Program designers and instructors should contribute to the creation of a culture in which each participant can find his or her voice and exert influence. Influence is part of healthy interdependent relationships in which the individual influences the group and the group influences the individual and in which trust is at the epicenter of these reciprocal relationships (McMillan, 1996). The fear of social isolation in first-year college students (Bell & Williams, 2006) will cause many to hide their voice and seek conformity, not influence. The outdoor program instructor has primary responsibility for creating a safe environment in which students can find their own voice as full and valued members of the group (Kalisch, 1999). Outdoor orientation leadership training curriculum should include a significant section on the development of facilitation skills such as diversity, sensitivity, listening, interpersonal conflict resolution, and group dynamics.

**Foster integration and fulfillment of needs.** For a group to achieve and sustain a sense of cohesion, the needs of an individual must be met within the group through reinforcement. Risk and challenge should be defining characteristics of an outdoor educational experience (Walsh & Golins, 1976), because the palpability of needs is heightened as students are confronted with a novel and unfamiliar environment that requires interdependence. For example, the basic human requirements for nutrition and sleep give tangible opportunities for service to others, resulting in the need for adequate food preparation and the establishment of weatherproof shelters. A well-designed outdoor orientation experience provides opportunities for individuals to demonstrate competence through activities such as meal preparation, meal clean-up, camp set-up, and group debriefing.

**Enhance shared emotional connection.** Communal emotional connection is cultivated through shared experiences that are positive, meaningful, and frequent (McMillan & Chavis, 1986). This concept aligns with the second question students will ask as they transition into the college environment—after students wonder if they belong, they then wonder how they belong (Bell et al., 2014). Students may sense they belong in ways that are not comfortable to them (I belong only if I pretend to be something I am not). Belongingness is enhanced “where a group

shares power among participants in a just and equitable manner” (Bell et al., 2014, p. 41). Yet the level of investment on the part of an individual, whether with time, vulnerability, or energy, is directly related to the level of emotional connection with the group.

Recommendations to enhance emotional connections include students sharing personal stories, such as describing their hometown. It is important for students to “unplug” from technology during their outdoor orientation experience to maximize human, rather than virtual, interactions. An “unplugged” environment may be novel and challenging for many students; however, this practice has the potential of creating an environment in which authentic interdependent relationships with diverse others can flourish.

## Limitations and Recommendations for Future Research

This study provides findings that expand the growing body of research investigating thriving and outdoor orientation, but not without limitations. First, although SEM is a powerful methodology for understanding and graphically representing pathways between variables, it is based on simultaneous regression analysis and not on experimental design. The second limitation of this study is that only three institutions were represented. Including more institutions in the study would have strengthened the generalizability of the findings. Third, the outdoor orientation programs varied considerably in their length and approach. Finally, time was a limitation. The study utilized a cross-sectional design and surveyed only first-year students at one point in time in their first semester. Additional surveys at the end of the first year or at graduation would have been helpful to provide a longitudinal perspective, much like Devlin’s (1996) study. Other studies, such as Gass, Garvey, and Sugerman’s (2003) 17-year follow-up study on the impacts of an outdoor orientation, demonstrate a durability of the effects.

Future research should include an experimental research design in which students who volunteer to participate in an orientation program are randomly assigned to participate in either the outdoor orientation experience (treatment group) or the standard on-campus orientation (control group). Future research should also replicate and expand the use of thriving as a theoretical model to better understand how outdoor orientation programs are linked to holistic well-being of students.

## Conclusion

This study used SEM to investigate the linkages between outdoor orientation experiences and student thriving with 295 students at three institutions in Canada and the United States. The findings illuminated an indirect pathway from outdoor orientation to thriving, suggesting outdoor orientation experiences provide an entry point into campus life that fosters a propensity for further involvement, which then leads to PSC and ultimately to thriving. Student affairs professionals and faculty have a unique opportunity to enhance the durability of outdoor orientation experiences back on campus and foster a sense of community so that students can thrive in their first year at college.

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